Investment in R&D sector

2088. SHRI BALAVANT *alias* BAL APTE:
SHRI KRIPAL PARMAR:

Will the Minister of STEEL be pleased to state:

(a) the investment made in public sector regarding research and development (R&D) works on steel during the last two years and the results thereof;

(b) whether Government have taken any decision to promote more investments on R&D works for improvement in quality of steel, keeping in view of its quality and economic prices in the world;

(c) if so, the details thereof; and

(d) the present position of the ongoing R&D projects and the projects which are lying under consideration of Government?

THE MINISTER OF STATE IN THE MINISTRY OF STEEL (DR. AKHILESH DAS): (a) The investment made on Research & Development on steel by public sector steel plants under Ministry of Steel during the last two years is as follows:

(Rs. in crore)

Year	Steel Authority of India Limited	Rashtriya Ispat Nigam Limited	Total Investment
2003-04	71.91	2.50	74.41
2004-05	60.55	6.25	66.80

The research projects have yielded benefits in terms of process optimization, increase in productivity, improvement in quality, development of improved steel products, reduction in cost of production, energy consumption & refectory consumption and utilization of solid waste etc.

(b) and (c) To supplement Research & Development activities in the iron & steel and allied sector, Government of India decided to invest up to Rs. 150 crore per annum from the interest accrued from Steel Development Fund (SDF). Accordingly an Empowered Committee (EC) was set up in 1998 under the chairmanship of Secretary (Steel) and members comprising of representatives of major steel prducers and other

experts in the field to approve and review R&D projects. So far 44 research projects have been approved by the EC with total cost of Rs. 294.53 crore. Of these, the projected SDF contribution will be Rs. 169.73 crore. The above includes one project for setting up of a Virtual Centre namely Steel Research and Development Mission (SRDM) which *inter-alia* aims at further stepping up R&D initiatives and expenditure in steel sector.

(d) There are 18 on going R&D projects funded partially from SDF. Details of these are given in the Statement-I (*See* below). In addition, there are 12 R&D projects under consideration for being funded from SDF. Details are given in the Statement-II.

Statement-I

List of the ongoing R&D projects assisted by Steel Development Fund (SDF)

(Rs. in crore)

Sl. No.	Name of the project	Project cost/ (SDF contribution)
1.	Maximization of blast furnace productivity with Indian iron ore; by National Metallurgical Laboratory, Jamshedpur, Tata Steel Ltd. and RDCIS, Steel Authority of India Ltd., Ranchi.	71.52 (38.650)
2.	Development of ultra high strength steel in as rolled condition through thermo mechanical controlled processing: by B.E. College, P.O. Howrah.	0.244 (0.223)
3.	Setting up of a semi pilot demonstration plant (30kg/Hr capacity) for production of synthetic rutile, pig iron & high pure ferric oxide form east coast ilmenite using thermal plasma technology: by National Mineral Development Cooperation (NMDC), Hyderabad.	1.185 (0.420)
4.	Development of process for advanced hot dip coated products: by RDCIS, SAIL	8.238 (4.525)
5.	Development of intelligent mill set up model for dynamic and adaptive control of plate mill: by RDCIS, SAIL, Ranchi.	26.31 (11.96)
6.	Pilot Scale Smelting Studies for production of alloy pig iron from Nickel-Chromium-Cobalt bearing Magnetite ores of Nagaland by Govt. of Nagaland with the help from National Metallurgical Laboratory, Jamshedpur.	0.78 (0.21)
7.	Development & Characterization of Spot Welding Techniques for Coated Steel Sheets: by Jadavpur University, Kolkata	0.672 (0.114)
8.	Extension of project proposal on Documentation and development of iron making process used by Tribals of India: by National Metallurgical Laboratory, Jamshedpur.	0.185 (0.148)

1	2	3
9.	Development of value added refractory products from Indian Bauxite by Central Glass & Ceramic Research Institute, Kolkata: by Indian Refractory Makers Association, Kolkata.	0.772 (0.31)
10.	Modelling and Control of microstructure and mechanism properties during hot strip rolling: by RDCIS, SAIL, Ranchi	3.684 (1.00)
11.	Development of Coke Dry Cooling Technology (CDCT) for Non-Recovery Coke ovens: by MECON Ltd., Ranchi	0.950 (0.95)
12.	High Efficiency High Temperature Top Fired Stoves: by MECON Ltd., Ranchi	0.39 (0.305)
13.	High Efficiency Copper Stave Coolers: by MECON Ltd., Ranchi	0.470 (0.417)
14.	Indigenous Development of Mini Pellet Plant of 0.5 Mt/yr for utilization of iron ore ultra fine: by MECON Ltd., Ranchi	1.30 (1.04)
15.	To set up a Steel Research & Development Mission (SRDM).	65.00 (65.00)
16.	Secondary Steel Making and Vacuum Automation Reckoner (SVAR): by Kalyani Carpenter Special Steel Ltd., Mundhwa.	0.76 (0.214)
17.	Prevention of Grain Growth in 38 MnS 6 Micro alloyed steel: by Kalyani Carpenter Special Steel Ltd (KCSSL), Mundhwa.	0.37 (0.109)
18.	Indigenous Development of Models for Dynamic BOF Process automation system at RSP: by RDCIS, SAIL, Ranchi in association with IIT, Kanpur	6.84 (4.19)
	TOTAL	**189.67 (129.785)**

Statement-II

List of applications under consideration for financial assistance for R&D work (as on 28.02.2006)

(Rs. in crore)

Sl. No.	Name of the project	Project cost/ (SDF contribution)
1.	A Center for Sheet Steel working: by Tata Steel Ltd., Jamshedpur.	31.50 (Not firmed up)
2.	Creation of Steel Research Centre: by Indian Institute of Technology, Kharagpur.	31.10 (31.10)
3.	Installation of demonstration plant of Continous Induction Furnace (CONTIFUR) for production of Iron and steel using iron ore fines and slimes: by Electro Therm (India) Limited, Ahmedabad.	95.00 (45.00)
4.	Utilization of Solid Wastes (Dolochar) Generated at Sponge Iron Industries of Orissa by Physical Beneficiation Techniques: by West	Not indicated

1	2	3
	Bengal Sponge Iron Manufactures Association in association with RRL, Bhubaneshwar and West Bengal Pollution Control Board.	
5.	Production of Ferro chrome from chrome ore fines and concentrate by solid reduction in fludized based reactor with use of natural gas: by FACOR	1.00 (1.00)
6.	Production of Low S & Low P Steels At VSP: Vishakhapatnam Steel Plant	1.12 (0.89)
7.	Reduction/Modification of Non-Metallic Inclusion In Steel of VSP: Vishakhapatnam Steel Plant.	1.22 (1.08)
8.	Prediction of Coke Properties with introduction of New Coal in Blend: by Vishakhapatnam Steel Plant.	1.25 (1.00)
9.	Development to reduce specific energy consumption and enhance process efficiency in ferro alloy production: by National Metaliurgical Laboratory, Jamshedpur in association with The Indian Ferro Alloys Producers' Association, Mumbai.	2.40 (1.77)
10.	Quality improvement of low grade Iron Ore: by Research & Development Center for Iron & Steel, Steel Authority of India Ltd., Racnhi	11.50 (8.80)
11.	Development of integrated treatemnt process for coke oven effluents: by Research & Development Center for Iron & Steel, Steel Authority of India Ltd., Ranchi.	6.20 (3.15)
12.	Human resource development in Iron & Steel: by IISc, Bangalore.	Not firmed up
	TOTAL :	150.79 (116.50)

Increasing SAIL's distribution network

2089. DR. ALLADI P. RAJKUMAR: Will the Minister of STEEL be pleased to state:

(a) whether Government have asked SAIL to increase its distribution network to make the steel available in smaller towns;

(b) if so, the efforts made in this regard; and

(c) how this proposal is going to help SAIL to improve its performance in steel sector?

THE MINISTER OF STATE IN THE MINISTRY OF STEEL (DR. AKHILESH DAS): (a) and (b) With a view to increase consumption of steel in the country as also to widen the reach of Steel Authority of India Limited (SAIL's) branded items of common use *i.e.* TMT Bars and GP/GC Sheets, 208 dealers have been appointed at 99 district locations in 2004-05.